

AED Series



- Low Profile
- Single Outputs from 5 V to 48 V
- Universal Input
- Optional Floating Output
- High Power Density
- Class II Insulation on 36 W Version
- 3 Year Warranty

Specification

Input

| | |
|-----------------------|--|
| Input Voltage | • 90-264 VAC |
| Input Frequency | • 47-63 Hz |
| Input Current | • AED36: 1.00 A max AED45: 1.20 A max AED70: 2.00 A max |
| Inrush Current | • AED36: 50 A max at 230 VAC AED45: 100 A max at 230 VAC AED70: 100 A max at 240 VAC |
| Earth Leakage Current | • AED36: Class II AED45/70: 3.5 mA max |
| Power Factor | • Compliant with EN61000-3-2 |

Output

| | |
|--------------------------|---|
| Output Voltage | • See tables |
| Initial Set Accuracy | • $\pm 2\%$ |
| Minimum Load | • No minimum load requirement |
| Hold Up Time | • AED36: 8 ms min at 115 VAC AED45: 8 ms min at 115 VAC AED70: 20 ms min at 115 VAC |
| Line Regulation | • $\pm 1\%$ |
| Load Regulation | • See tables |
| Ripple & Noise | • 1% pk-pk max, 20 MHz BW (see note 2) |
| Overvoltage Protection | • Typical 125% max |
| Overload Protection | • 120-150% hiccup/trip & restart mode with auto recovery |
| Short Circuit Protection | • Continuous |
| Temperature Coefficient | • $\pm 0.05\%/^{\circ}\text{C}$ |

General

| | |
|---------------------|--|
| Efficiency | • 85% typical at 230 VAC & 100% load |
| Isolation | • 3000 VAC Input to Output, 1500 VAC Input to Ground. Negative output is connected to ground. For optional 500 VAC output to ground isolation add suffix '-F' to model number |
| Switching Frequency | • 60 kHz ± 10 kHz |
| Power Density | • AED36: 5.34 W/in ³ AED45: 3.20 W/in ³ AED70: 4.98 W/in ³ |
| MTBF | • 200 kHrs to MIL-HDBK-217F at 25 °C, GB |

Environmental

| | |
|-----------------------|---|
| Operating Temperature | • 0 °C to +60 °C derate linearly from 100% load at +40 °C to 50% load at +60 °C |
| Operating Humidity | • 93% RH, non-condensing |
| Operating Altitude | • 2000 m |
| Storage Temperature | • -20 °C to +85 °C |

EMC & Safety

| | |
|-------------------|--|
| Emissions | • EN55022 Class B conducted & radiated |
| Harmonic Currents | • EN61000-3-2, Class A |
| Voltage Flicker | • EN61000-3-3 |
| ESD Immunity | • EN61000-4-2, 8 kV air, 4 kV contact Perf Criteria A |
| Radiated Immunity | • EN61000-4-3, 3 V/m Perf Criteria A |
| EFT/Burst | • EN61000-4-4, level 2 Perf Criteria A |
| Safety Approvals | • EN60950-1, UL60950-1 |

Models and Ratings

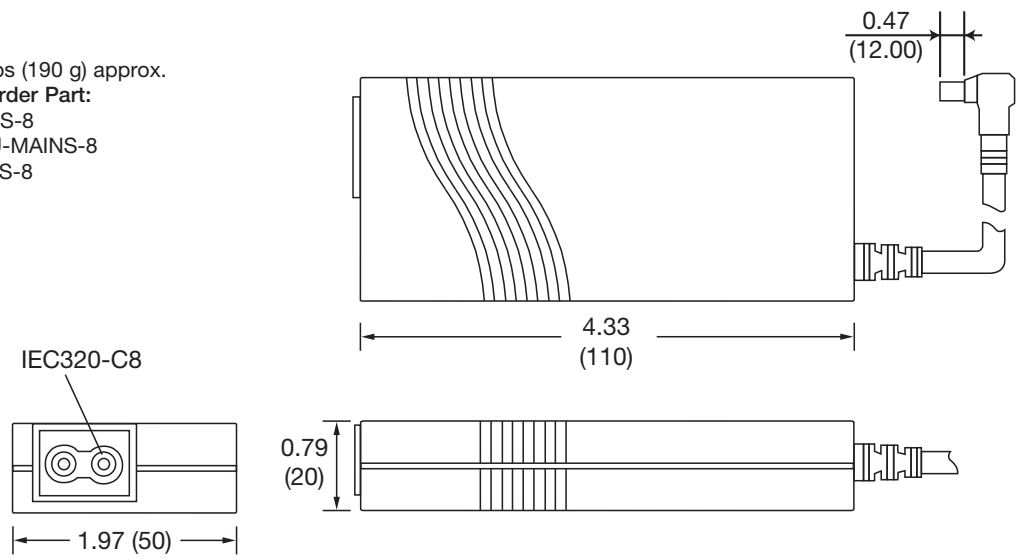
| Output Power Maximum | Output Voltage Nominal | Output Current Maximum | Load Regulation ⁽¹⁾ | Model Number |
|----------------------|------------------------|------------------------|--------------------------------|--------------|
| 20 W | 5.0 V | 4.00 A | ±6% | AED36US05 |
| 27 W | 9.0 V | 3.00 A | ±5% | AED36US09 |
| 30 W | 12.0 V | 2.50 A | ±5% | AED36US12 |
| 32 W | 13.5 V | 2.40 A | ±5% | AED36US13 |
| 36 W | 15.0 V | 2.40 A | ±3% | AED36US15 |
| 36 W | 18.0 V | 2.00 A | ±2% | AED36US18 |
| 36 W | 24.0 V | 1.50 A | ±2% | AED36US24 |
| 36 W | 48.0 V | 0.75 A | ±2% | AED36US48 |

Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor.

Mechanical Details

Weight: 0.42 lbs (190 g) approx.
 Power Cord Order Part:
 UK - UK-MAINS-8
 European - EU-MAINS-8
 US - US-MAINS-8



Notes

All dimensions shown in inches (mm)
 Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
 Optional output connectors available.
 Output cable is 48" (1220mm) approx.

Models and Ratings

| Output Power Maximum | Output Voltage Nominal | Output Current Maximum | Load Regulation ⁽¹⁾ | Model Number |
|----------------------|------------------------|------------------------|--------------------------------|--------------|
| 30 W | 5.0 V | 6.00 A | ±6% | AED45US05 |
| 45 W | 12.0 V | 3.75 A | ±5% | AED45US12 |
| 45 W | 15.0 V | 3.00 A | ±3% | AED45US15 |
| 45 W | 18.5 V | 2.50 A | ±2% | AED45US18 |
| 45 W | 19.0 V | 2.37 A | ±2% | AED45US19 |
| 45 W | 24.0 V | 1.88 A | ±2% | AED45US24 |
| 48 W | 48.0 V | 1.00 A | ±2% | AED45US48 |

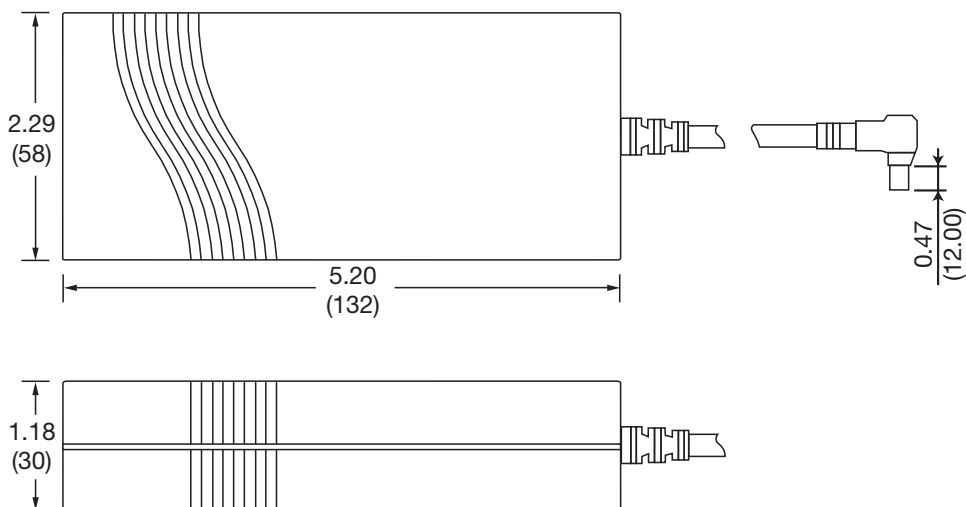
Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF electrolytic capacitor.

Mechanical Details

Weight: 0.73 lbs (330 g) approx.
 Power Cord Order Part:
 UK - UK-MAINS-IEC
 European - EU-MAINS-IEC
 US - US-MAINS-IEC

IEC320-C14



Notes

All dimensions shown in inches (mm)
 Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
 Optional output connectors available.
 Output cable is 48" (1220mm) approx.

Models and Ratings

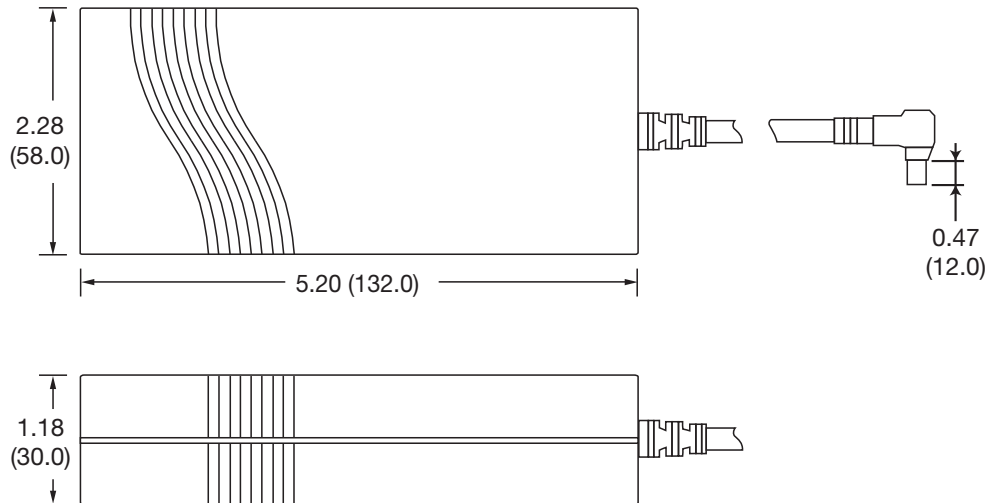
| Output Power Maximum | Output Voltage Nominal | Output Current Maximum | Load Regulation ⁽¹⁾ | Model Number |
|----------------------|------------------------|------------------------|--------------------------------|--------------|
| 70 W | 12.0 V | 5.50 A | ±5% | AED70US12 |
| 70 W | 15.0 V | 4.60 A | ±3% | AED70US15 |
| 70 W | 18.0 V | 3.90 A | ±2% | AED70US18 |
| 70 W | 19.0 V | 3.70 A | ±2% | AED70US19 |
| 70 W | 24.0 V | 3.00 A | ±2% | AED70US24 |
| 70 W | 48.0 V | 1.50 A | ±2% | AED70US48 |

Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor.

Mechanical Details

Weight: 0.76 lbs (345 g) approx.
 Power Cord Order Part:
 UK - UK-MAINS-IEC
 European - EU-MAINS-IEC
 US - US-MAINS-IEC



Notes

- All dimensions shown in inches (mm).
1. Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
 2. Optional output connectors available.
 3. Output cable is 48" (1220mm) approx.